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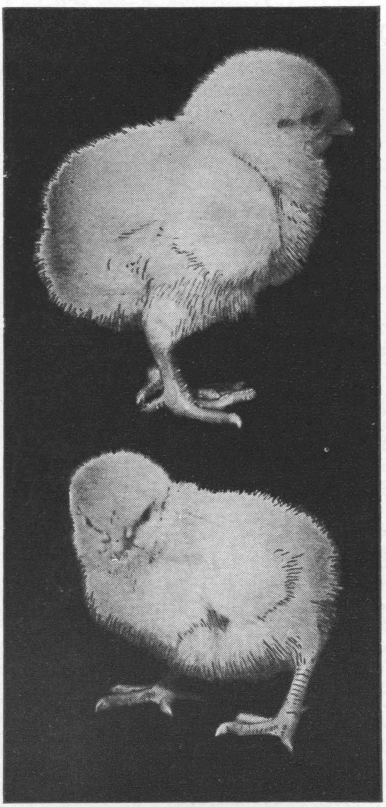
GROWING BABY CHICKS



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GROWING BABY CHICKS

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The most important task of poultrymen is the growing of strong healthy baby chicks. The success of a poultry flock can be measured by the kind of chicks produced. Health is the foundation of any successful breeding program and must have its beginning with the day old chick.

"As the Twig Is Bent So Is the Tree Inclined"

The growing of strong, healthy chicks is dependent upon the use of a very definite sanitation program. Tremendous losses among growing chicks are caused by dirty houses and yards. These losses can be reduced to a minimum by attention to the little details of management.

Early Hatching Is Imperative

Early hatched chicks are most desirable. The months of February, March and April are considered to be the best months for hatching out chicks to produce pullets for winter production. There is less danger from disease, and the chicks are usually stronger, more vigorous and will develop more rapidly and uniformly.

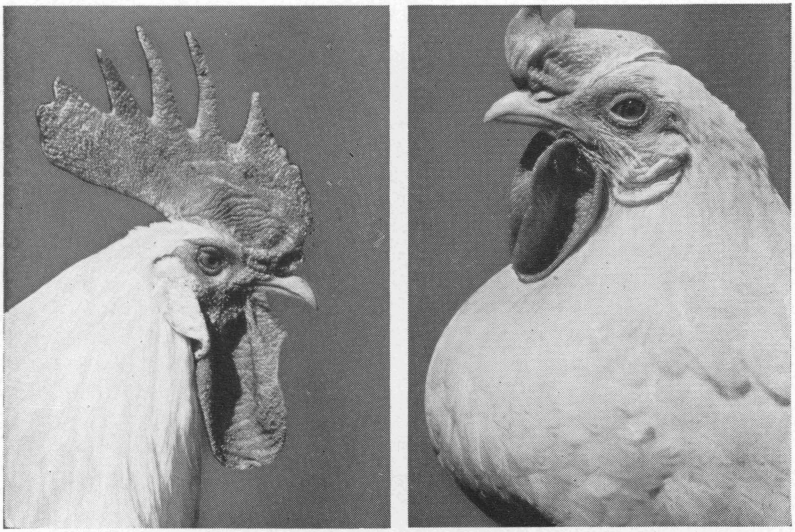
The cockerels from early hatched chicks can be disposed of on a higher broiler and fryer market. The early hatched pullet gets a good start before hot weather sets in. She develops rapidly through the summer months, comes into production in the early fall, and is in full production during the period of high egg prices.

Select Stock for Breeding Qualities

No person should attempt to raise chicks from a flock unless the hens and cockerels have been carefully selected for breeding qualities.

Such hens should be vigorous, healthy, of good size, and of desirable type. September and October are the best months for selecting hens for breedrs, for it is much easier at this time to pick the outstanding hens in the flock. As a rule the

hens that are still laying in September are the best layers. After the hens have gone through a molt, it is much more difficult to determine which were the good layers. Hens that are still in lay in September are alert, active and have a good appetite, indicating health and vigor, and should make good breeders. For those interested in a more efficient selection of breeders, a four band system of selection is recommended.



Choice birds such as these should be selected for breeding.

Do not use any birds, male or female, that show any signs of disease or weakness. The entire breeding flock should be tested for pullorum disease, or bacillary white diarrhea, and all reactors should be culled out. This is very important as pullorum disease is transmitted from the hen and the egg to the baby chick.

The male bird is literally "half the flock" and careful selection for the breeding pen is very important. Well matured, vigorous cockerels are desired. Older male birds may be used if thy are outstanding individuals and have retained their health and vigor. When possible, use only pedigreed male birds with known production ancestry.

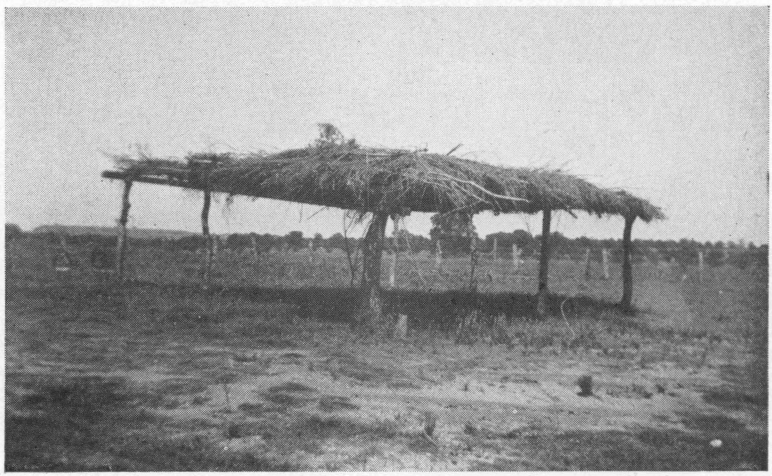
Buy Chicks from Reliable Breeders

Many poultry raisers do not have the equipment nor the time to select a breeding flock and to maintain breeding pens that will give them top quality chicks. Such individuals should secure their chicks from reliable breeders or hatcherymen, which are within driving distance of most farmers. By buying chicks near home, the hazards of long shipments are reduced and adjustments for losses are much easier to obtain.

Prepare in Advance for Baby Chicks

Much of the success in raising chicks depends on having a clean brooder house with all its equipment in perfect working order at the start. The interior of the brooder house should be cleaned and disinfected thoroughly before the house is moved to clean ground and before the chicks are placed in it. All movable equipment should be removed and cleaned. The ceiling and walls of the brooder house should be brushed to remove dust and dirt. The lower part of the wall and the floor should be scrubbed with a solution made by mixing one pound of lye with 40 gallons of water.

After the house and equipment have been thoroughly cleaned, it should be moved to clean ground. The land should be plowed and seeded, well in advance, to secure a good stand



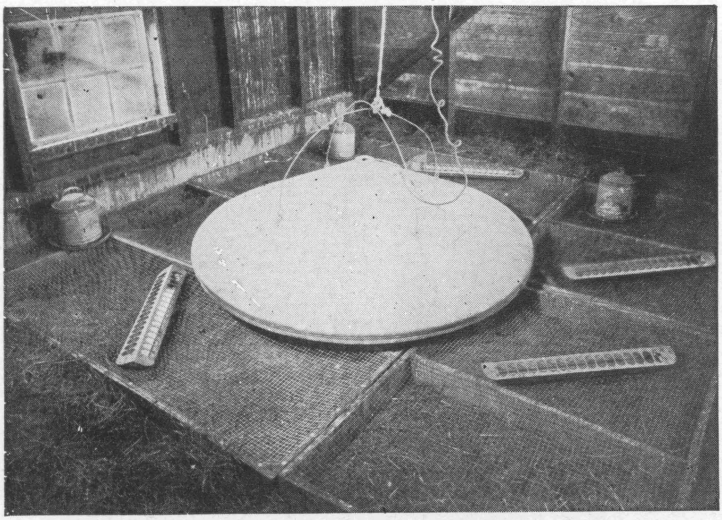
The brooder house should be located near a good shade. A temporary thatch shade such as the one shown above is easily and quickly built.

of tender green feed for the chicks. Land that is contaminated by drainage water from a poultry range or land where poultry manure has been spread should not be used. Good shade, either trees or a temporary brush arbor, should be near the house.

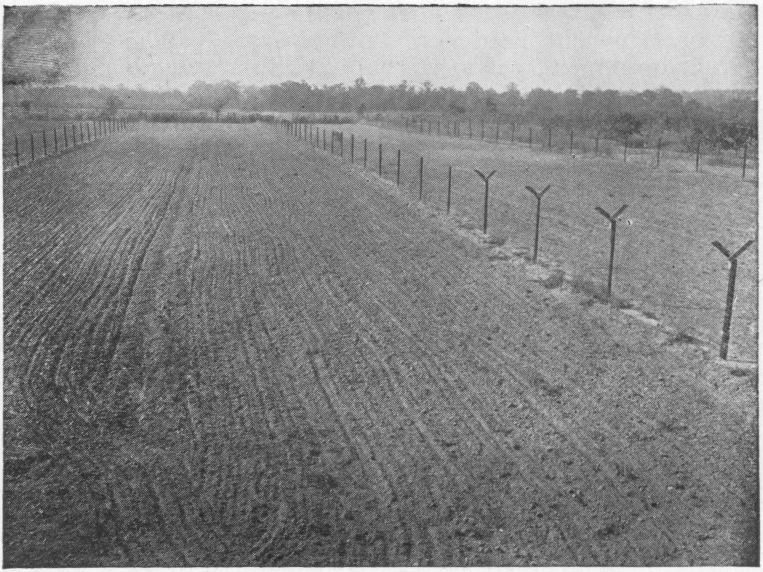
At least two days before the chicks arrive, start the brooder stove and make all necessary adjustments to place the brooder in correct working order. Place clean litter on the floor. Check up on the feeder and water containers.

A good litter scattered a few inches over the floor will absorb moisture and simplify cleaning. Prairie hay, oat, rice and when straw make satisfactory litter. Peat moss is excellent but more expensive. Shavings or sand may be used if plenty of feed is available, otherwise the chicks will have a tendency to eat the litter.

A false floor made of hardware cloth, the ½ inch hail screen and used as indicated, will keep the chicks away from filth. With such a floor, a weekly cleaning is enough. The frames are made of 1 x 4 inch material and built in convenient sizes 3 x 6 feet, with a center cross-piece to prevent sagging. Several frames are put together to make a floor that will extend several feet beyond the edge of the hover. Feed and water containers are placed on the floor. Temporary roosts can be



Hardware cloth brooder floor keeps the chicks away from the filth and helps to prevent disease.



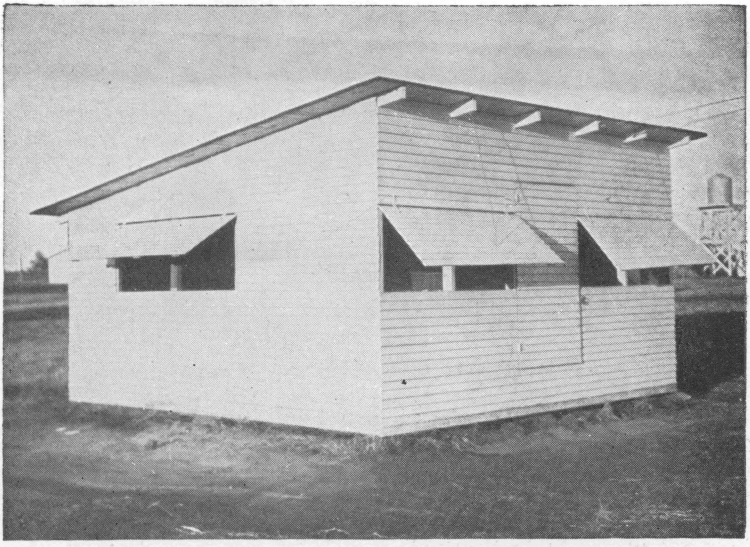
Filthy ground is the chief breeding place of diseases. Frequent plowing or exposing to direct sunlight makes for cleanliness.

built on a movable wire frame and will aid in teaching chicks to roost early and also protect them from the droppings.

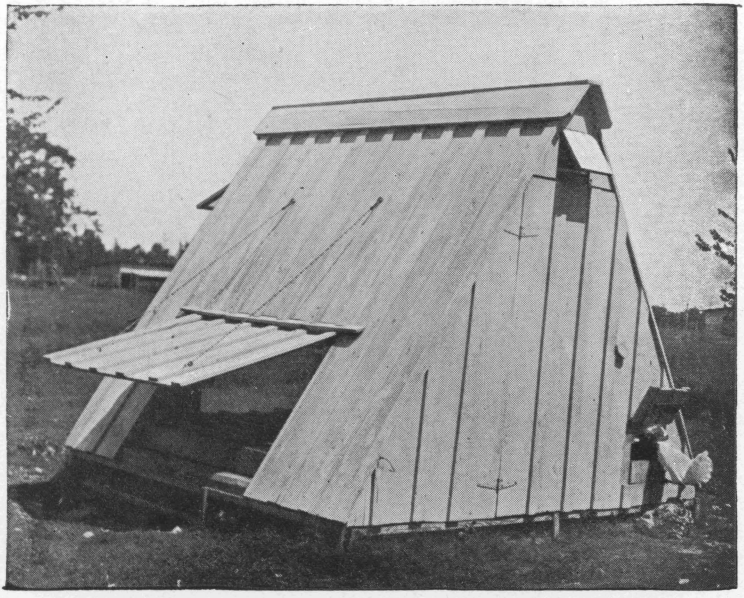
Filthy ground is the chief breeding place of diseases. If the house cannot be moved to clean ground, the ground around the house should be plowed. A good brooding practice is to construct a wire frame to enclose one side of the brooder house. During the first week that the chicks are allowed on the ground they are kept in this enclosure. The second week it is another side of the house, and so on until the chicks have ranged on all four sides. The brooder house should then be skidded to fresh ground and the same practice repeated. Young birds which range on tender green feed during this period are usually the healthiest and strongest.

Colony House Is A Good Unit

A small 10 x 12 foot movable house is ideal for the average farmer and makes an economical unit for the poultryman. No one type of construction or ventilator is outstanding; the only requirement is that the walls and windows be tight and adjustable to the weather without causing drafts.



The colony brooder house is good for the average farmer.



An A-type combination brooder and range house has many uses.

The shed roof colony house is in common use. Built on 4 x 4 inch sled runners, it is easily moved to clean ground. Large windows which may be opened wide allow the house to be used as a pullet range house during the summer.

In recent years an A-type combination brooder house and range shelter has become popular. It is lighter and stands moving about without damage, which is not always true of the shed type. When used for brooding, it has a solid floor built in sections and the ventilators are arranged to suit the weather. Later, after a wire floor has replaced the solid one, roosts are installed and the hinged sides are raised, it serves as an excellent summer range shelter.

Don't Overcrowd the Chicks

It is poor economy to place more than 250 to 300 chicks under a 50 to 60-inch hover. When more than this are placed together, the mortality rate is often high, and the pullets that are raised are weakened and do not make profitable layers.

Putting too many chicks under one stove or in the brooder house is the most common and the most costly mistake that poultrymen make. Every problem that besets the brooding of chicks is made worse by overcrowding. It is hard to avoid smothering, chilling, overheating, dirty litter, toe picking, tail picking, coccidiosis, bronchitis, and runty chicks if too many chicks are placed in one unit.

Teach Chicks to Hover

Chicks must be taught to go to the brooder for warmth. Some means must be provided to prevent drafts around the hover and to keep the chicks confined so that they will not wander off and become chilled. This may be done by encircling the hover with a guard placed about two feet away. This guard may be made of strips of roofing paper or of mesh wire covered with feed sacks to prevent drafts, and should be 12 inches in height. After the first day the circle should be gradually enlarged and the guard may be entirely removed when all the chicks have learned to go to the hover for warmth.

Keep Chicks Warm and Comfortable

Enough heat must be supplied to keep the chicks warm and comfortable. The action of the chicks rather than the thermometer is the surest guide toward the correct temperature. When the temperature is right, the chicks when resting

will lie or spread out in a circle around the outer edge of the hover. When they crawl under each other, or gather next to the stove, they show that more heat is needed. When they crowd out from under the hover and pant they are too hot.

A temperature of 98 degrees to 100 degrees F. two inches above the floor at the outer edge of the hover is desirable during the first week. Under ordinary conditions the temperature may be lowered to 96 degrees the second week, 92 degrees the third week and 88 degrees the fourth week. These changes should be made gradually from one week to the next. Watch the chicks carefully during the first few weeks and make certain that they have the proper temperature, as even a few minutes of chilling or over-heating may result in many deaths.

Chilling of chicks causes more losses than perhaps any other thing. The common white diarrhea often mistakenly referred to as Pullorum Disease is more often the result of the chicks becoming chilled. Such chicks as recover very seldom develop into good birds but are usually stunted and make poor layers.

Teach Chicks to Roost

Teach the chicks to roost as soon as they find it comfortable to remain away from the hover over night. They usually begin roosting about the third week, depending upon the breed of chickens and weather conditions.

When chicks are three weeks old, several rows of perches may be placed a few inches above the floor across the house back of the hover. Chicks can easily be forced on these perches and taught to roost. It may be necessary to visit the brooder house several nights and place chicks on the roosts before they will take to them voluntarily.

Crowding Results from Mismanagement

The tendency of chicks to crowd in corners or along the wall is usually the result of some mismanagement, such as permitting drafts in the brooder house or too much or too little heat. It is a habit, easier to prevent than to overcome once it is formed. Chicks that pile up may smother to death or become unthrifty and fail to make normal growth.

Crowding usually follows a drop in temperature under the hover or excessive heat. It may also follow a sudden cold spell if the stove has been allowed to go out before the chicks have all been taught to roost. A sunny spot in a part of the house may also draw the chicks and cause them to pile up.

Blocking the corners with boards or wires will prevent chicks from crowding. If the brooder stove is kept going until all the chicks have learned to roost at night, crowding will be prevented. The chicks may not go near the hover, but in case they become chilly the heat is there.

Dirty and worn wing and tail feathers are the first indications of crowding at night. The next symptoms are colds and runty chicks.

Feed Chicks a Good Starter Mash

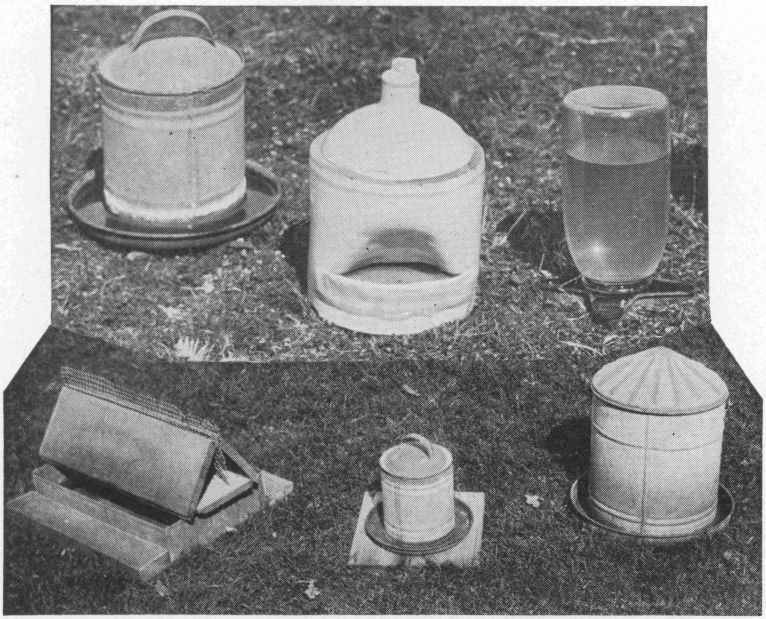
Feed and water should be in the brooder house when the chicks arrive. Contrary to the old belief that chicks should be starved for 72 hours after hatching, the chicks should be fed as soon as they are placed in the brooder house. A good practice to follow, and one that will help to start the chicks eating and drinking, is to dip the beaks in a little buttermilk or water as they are being placed in the brooder house.

There is nothing complicated about feeding the chicks but the feed itself must contain the necessary ingredients to insure proper development and a uniform growth. For this reason a good starter mash is recommended. This can be either

Chicks properly fed will develop into profitable layers.

a commercial or a home mixed mash. If mixed at home care should be given to see that the proper proportions are used and that substitutions are not made.

The mash should be left before the chicks at all times. Grit and oyster shell of chick size should be kept in hoppers for the chicks when they want it. They will find it and eat what is wanted. A good supply of green feed should be obtainable at all times during the growing period.



Waterers—keep them clean is the main idea.

Water is Essential for Proper Growth

Water is a very important part of the chicks' diet and should always be supplied fresh several times a day, for the mash will wash off of the beaks and settle in the bottom of the water containers. If the water is clean and pure enough for human consumption then there is no need for adding any kind of disinfectant or tonic to the water.

Skim milk is excellent for chicks and should be supplied when available. Milk should never be fed in metal containers, and containers must be cleaned each time milk is fed. Milk at-

tracts flies and for this reason the poultryman may find it convenient to feed it only for a few hours in the mornings.

Moisture accumulates around feed and water containers and if neglected may bring about an outbreak of disease. Move the containers to a new location in the brooder house each day.

Start Growing Mash After Six Weeks

The chicks should be fed on chick starter for a period of at least six weeks; after that they can be changed over to a growing mash. The mash mixtures which follow will give satisfactory results.

	Starting Mash (First 6 weeks)	Growing Mash (After 6 weeks)
Corn meal (yellow)	55 pounds	36 pounds
Wheat bran	—	20 pounds
Wheat grey shorts	20 pounds	20 pounds
Meat and bone scrap	6 pounds	5 pounds
Dried buttermilk or skim milk	6 pounds	—
Cottonseed meal	6 pounds	10 pounds
Alfalfa leaf meal	5 pounds	5 pounds
Oyster shell	1 pound	2 pounds
Bone meal	—	1 pound
Salt	1 pound	1 pound

The summer range shelter shown above is very convenient for growing pullets on range.

Place Pullets on Range to Develop

After the chicks are about six weeks old and if the weather permits, the cockerels and pullets should be separated. The cockerels that are to be finished for market are left in the brooder house. Those that are to be retained as breeders should be placed on range and managed the same as the pullets.

The pullets should be placed on clean range, and supplied with green feed and shade. A very convenient pullet house is the summer range shelter shown here. This shelter is light in construction and can easily be moved to new location on the range. The size is 10 x 10 feet and the peak of the roof is five feet. A shelter this size will accomodate 60 pullets to maturity without crowding.

The pullets should be left on the range until they are ready to lay and then they should be transferred to a laying house. Often the poultryman may find his pullets maturing too rapidly. In this case, the protein content of the mash should be reduced by adding more yellow corn meal or by restricting the amount of mash fed and increasing the grain. There is not much danger of getting pullets too fat when they come into production. It is important that the pullet have a good layer of reserve fat at the time she comes into lay.

Pullets on range should be examined occasionally to see if they have any parasites such as lice, bluebugs, or intestinal worms. Such parasites can cause considerable damage to the growing bird.

Poultry Diseases are Management Problems

Careful management practices are sure to reduce death losses. In most cases, losses are due to disease and parasites but a still larger percentage can be traced to the quality of the chick. Some chicks are weak when hatched because of poor management and improper selection of the breeding stock.

DIARRHEA is not a disease but a symptom of the derangement of the digestive organs. Diarrhea in chicks may be caused by faulty feeding, crowding and exposure, and to overheating and chilling, all of which may produce congestion in the intestines and lungs. Eating litter and other indigestible matter will induce cases of diarrhea in young chicks. When a diarrhea makes its appearance, the brooding and feeding practices should be checked to find the cause.

PULLORUM DISEASE, commonly referred to as bacillary white diarrhea, is an inherited disease and is passed from the infected hen through the egg to the chick. The disease is highly contagious and may be spread in incubators and brooders.

No treatment has been found to be effective in handling the disease. The control of an outbreak of pullorum disease depends on rigid sanitation measures to curb the source of infection. Blood testing the breeding stock and removing all reactors will reduce the disease to a minimum. Only chicks from blood tested flocks should be hatched or bought over two weeks of age.

COCCIDIOSIS is the most fatal disease of chicks over two weeks of age. The disease is caused by an organism which gains entrance into the chick's body through the mouth with food and water. In young birds the symptoms of coccidiosis are droopy wings and ruffled feathers. A diarrhea often develops that may or may not be tinted with blood. The disease progresses rapidly and immediate treatment is necessary to prevent severe losses.

The most dangerous source of moisture in the brooder house is around the water fountains. After the first week water fountains should be placed on half inch, square mesh wire platforms about four inches high. From that time on, the floor around the platforms can be kept dry. When outside feeding and watering is done, the wire platforms should go along to prevent chickens from picking up moist dirt or litter around the fountains.

Deep, dry litter stirred each day with a rake or fork is preferable in many ways to shallow litter cleaned more frequently. The fermentation set up in such litter due to the presence of the droppings destroys the coccidia buried in the litter. Constant dryness and daily stirring are essential parts of this management practice. Such litter has often been left in the brooder house several weeks without difficulty.

A mild flush made of one tablespoon of soda to a gallon of drinking water and given to the chicks once a week after the chicks are from 10 days to two weeks old seems to be a very effective control practice. The theory behind this frequent mild flush is that the coccidiosis organism has difficulty in getting established.

The milk flush has been very popular. At present it is very expensive except where skim milk is available. When an outbreak occurs, the drinking water should be removed for an

entire day and milk substituted for it. After the first day, both milk and water should be offered for a 10 day period. Any procedure that cleanses and rests the digestive tract is helpful.

Successful treatment of acute coccidiosis cases depends on prompt action. The milk flush should be given. Sanitation should be carefully practiced following an outbreak. All houses should be thoroughly cleaned. One-half inch hardware cloth floor should be used if available, to prevent contact with droppings, the source of reinfection.

FOWL POX is a very common disease of poultry. The usual appearance is made by small blisterlike growths of a yellowish color appearing on the comb, wattles or skin of the head. Later these sores become dry and crusty and are covered with dark brown scabs. The birds become inactive; there is often a slight nasal discharge, the eyes water and as the disease progresses, cankerous growths often appear in the eyes and throats of the birds. Although death loss is not as severe as might be expected many birds do die of strangulation due to stoppage of the windpipe.

All birds showing symptoms of the disease should be removed from the flock and placed in a well ventilated room. The cankerous growths should be removed and the places painted with tincture of iodine. Where the eyes are affected, a 10 percent solution of argyrol should be used. It is well to give the confined birds a soda flush once a week.

There is now available a fowl pox vaccine that is effective against this disease. The vaccine should be secured fresh and be manufactured by a reliable company. Both pullets and cockerels can be vaccinated. The method used is to pluck a few feathers from the thigh of the young bird and then apply a very small amount of vaccine with a brush to two follicles. Care must be exercised to see that the vaccine is applied to a small area as too much is harmful. The best age for vaccinating is when the birds are from one to three months of age.

The young stock should be separated from the older stock. Cockerels for sale as broilers or fryers should not be vaccinated unless sufficient time is allowed to permit the full recovery. If not vaccniated, they must be separated from the other birds.

The vaccine does not produce a harmful effect if properly administered and no change in flock management is necessary.

Do not vaccinate grown birds or pullets coming into lay without following closely the instructions given by the laboratory producing the vaccine.

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